



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,331	04/12/2006	Patrick Fontaine	PF030159	3620

7590 05/04/2009  
Joseph J Laks  
Patent Operations  
Thomson Licensing Inc  
PO Box 5312  
Princeton, NJ 08543-5312

EXAMINER
----------

REGO, DOMINIC E

ART UNIT	PAPER NUMBER
----------	--------------

2618

MAIL DATE	DELIVERY MODE
-----------	---------------

05/04/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/575,331	<b>Applicant(s)</b> FONTAINE ET AL.	
	<b>Examiner</b> DOMINIC E. REGO	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9, 15 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 15 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This communication is responsive to the application filed on January 27, 2009.  
Claims 1-9, 15, and 18 are pending and presented for prosecution.  
Claims 1-9, 15, and 18 have been amended

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3,5-9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior art in view of Labonte et al (US Patent #6,259,918) in view of Proctor, Jr. et al. (US Patent #6,941,152).

**Regarding claim 1**, Admitted Prior Art teaches a method of communication in transmitting/receiving stations in a wireless communication network, in which multi-receiver frames are exchanged between a station and a plurality of other stations indicating the transmitting station and the receiving station in an omnidirectional manner using an omnidirectional antenna (Page 2, lines 5-8; lines 21-23, lines 25-27), and mono-receiver frames are exchanged between the transmitting station and the receiving station (Page 2, lines 23-24), except mono-receiver transmitting and receiving in a

Art Unit: 2618

directional manner, wherein the transmission in an omnidirectional manner is effected in a more robust fashion than the transmission in a directional manner using a directional antenna.

However, in related art, Labonte teaches mono-receiver (Figures 4A and 4B, item 110) transmitting and receiving between transmitting station and receiving station, in a directional manner using a directional antenna (*Col 4, lines 2-29, Labonte teaches a base station 102 for the cell 100 includes a first directive (sector) antenna 104 operable to form a wide beam 106 for each sector 108, with the totality of the sector coverage formed thereby providing substantially omni-directional radio frequency coverage throughout the cell site area. The base station 102 for the cell 100 further includes a plurality of second directive (smart) antennas 110, one for each sector, and each operable to form a plurality of separate, perhaps slightly overlapping, narrow beams 112 (either switched or steerable) within each sector 108, with the totality of the smart beams formed thereby providing substantially omni-directional radio frequency coverage throughout the cell site area*). Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Labonte to Admitted Prior Art in order to provide service to a distant mobile station.

The combination of Admitted Prior Art and Labonte fail to teach wherein the transmission in an omnidirectional manner is effected in a more robust fashion than the transmission in a directional manner using a directional antenna.

However, in related art, Proctor, Jr. teaches wherein the transmission in an omnidirectional manner is effected in a more robust fashion than the transmission in a

Art Unit: 2618

directional manner using a directional antenna (Col 1, lines 18-48; Col 4, line 59-Col 5, line 33).

Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Proctor, Jr. to Admitted Prior Art and Labonte in order to reduce interference.

**Regarding claim 2**, the combination of Labonte and Proctor, Jr. teach all the claimed elements in claim 1. In addition, Proctor, Jr. teaches the method according to claim 1, wherein the more robust transmission is effected at a lower throughput than the less robust transmission (Col 4, line 59-Col 5, line 33).

**Regarding claim 3**, the combination of Admitted Prior Art, Labonte and Proctor, Jr. teach all the claimed elements in claim 1. In addition, Proctor, Jr. teaches the method, wherein the mono-receiver frames are modulated by a modulation with a first number of phases and in that the multi-receiver frames are modulated by a modulation with a second number of phases, and in that the first number of phases is greater than the second number of phases (Col 4, line 59-Col 5, line 33).

**Regarding claim 5**, the combination of Admitted Prior Art, Labonte and Proctor, Jr. teach all the claimed elements in claim 1. In addition, Proctor, Jr. teaches the method, wherein the mono-receiver frames are coded with a first forward error correction rate and the multi-receiver frames are coded with a second forward error correction rate, and in that the first rate is higher than the second rate (Col 4, line 59-Col 5, line 33).

**Regarding claim 6**, the combination of Admitted Prior Art, Labonte and Proctor, Jr. teach all the claimed elements in claim 5. In addition, Admitted Prior Art teaches the method, wherein the mono-receiver frames and the multi-receiver frames are modulated by the same modulation (Page 2, lines 17-36).

**Regarding claim 7**, the combination of Admitted Prior Art, Labonte and Proctor, Jr. teach all the claimed elements in claims 5 and 12. In addition, Admitted Prior Art teaches the method, wherein the transmission is in compliance with one of the standards belonging to the set comprising: Hiperlan type 2; and IEEE802.11a (Page 1, lines 24-25).

**Regarding claim 8**, the combination of Admitted Prior Art, Labonte and Proctor, Jr. teach all the claimed elements in claim 1. In addition, Admitted Prior Art teaches the method, wherein the transmission is in compliance with IEEE 802.11g (Page 1, lines 24-25).

**Regarding claim 9**, Admitted Prior Art teaches a transmitting and/or receiving station for a wireless communication network, wherein said station comprises an omnidirectional antenna (Page 2, lines 25-27) to transmit and/or receive multi-receiver frames in an omnidirectional manner indicating the transmitting and the receiving station (Page 2, lines 5-8; lines 21-23, lines 25-27) and at least one antenna to transmit and/or receive mono-receiver frames (Page 2, lines 23-24), determined by the multi-receiver frames (Page 2, lines 5-25), except for mono-receiver transmitting and receiving in a directional manner and the transmission in a omnidirectional manner being effected in a more robust fashion than the transmission in a directional manner.

However, in related art, Labonte teaches mono-receiver (Figures 4A and 4B, item 110) transmitting and receiving between transmitting station and receiving station, in a directional manner using a directional antenna (*Col 4, lines 2-29, Labonte teaches a base station 102 for the cell 100 includes a first directive (sector) antenna 104 operable to form a wide beam 106 for each sector 108, with the totality of the sector coverage formed thereby providing substantially omni-directional radio frequency coverage throughout the cell site area. The base station 102 for the cell 100 further includes a plurality of second directive (smart) antennas 110, one for each sector, and each operable to form a plurality of separate, perhaps slightly overlapping, narrow beams 112 (either switched or steerable) within each sector 108, with the totality of the smart beams formed thereby providing substantially omni-directional radio frequency coverage throughout the cell site area*). Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Labonte to Admitted Prior Art in order to provide service to a distant mobile station.

The combination of Admitted Prior Art and Labonte fail to teach the transmission in a omnidirectional manner being effected in a more robust fashion than the transmission in a directional manner.

However, in related art, Proctor, Jr. teaches the transmission in a omnidirectional manner being effected in a more robust fashion than the transmission in a directional manner (*Col 1, lines 18-48; Col 4, line 59-Col 5, line 33*).

Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Proctor, Jr. to Admitted Prior Art and Labonte in order to reduce interference.

**Regarding claim 18**, the combination of Admitted Prior Art, Labonte and Proctor, Jr. teach all the claim element in claim 9. In addition, Proctor, Jr. teaches wireless communication network wherein it comprises several transmitting and/or receiving stations (Proctor, Jr., Figure 2 and Admitted Prior Art, Page 1, lines 33-35).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art in view of Labonte et al (US Patent #6,259,918) in view of Proctor, Jr. et al. (US Patent #6,941,152) and further in view of Trompower (US Patent #6,132,306).

**Regarding claim 4**, the combination of Admitted Prior Art, Labonte and Proctor, Jr. fail to teach the method, wherein the mono-receiver frames are modulated by a modulation with more than two phases and in that the multi-receiver frames are modulated by a two phases modulation.

However, in related art, Trompower teaches the method, wherein the mono-receiver frames are modulated by a modulation with more than two phases and in that the multi-receiver frames are modulated by a two phases modulation (Col 11, lines 17-34).



Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Trompower to Admitted Prior Art, Labonte and Proctor, Jr. in order to avoid interference.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art in view of Labonte et al (US Patent #6,259,918) in view of Proctor, Jr. et al. (US Patent #6,941,152) and further in view of Pekonen et al. (US Patent #7,092,672).

**Regarding claim 15**, the combination of Admitted Prior Art, Labonte and Proctor, Jr. teach all the claimed elements in claim 9, except the station, wherein it comprises four directional antennas oriented at 90 degree with respect to one another.

However, in related art, Pekonen teaches station, wherein it comprises four directional antennas oriented at 90 degree with respect to one another (Col 4, lines 35-55).

Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Pekonen to Admitted Prior Art, Labonte and Proctor, Jr. in order to enable the antenna's angle of coverage to be adjusted.

6. Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as

Art Unit: 2618

well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. SEE MPEP 2141.02 [R-5] VI. PRIOR ART MUST BE CONSIDERED IN ITS ENTIRETY, INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE CLAIMS: A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) *In re Fulton*, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004). >See also MPEP §2123.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-9, 15, and 18 have been considered but are moot in view of the new ground(s) of rejection. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_\_\_, 82 USPQ2d 1385, 1395-97 (2007) identified a number of rationales to support a conclusion of obviousness which are consistent with the proper "functional approach" to the determination of obviousness as laid down in *Graham*. The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason why the claimed invention would have been obvious. Exemplary rationales that may support a conclusion of obviousness include: A) combining prior art elements according to known method to yield predictable results; B) Simple substitution of one known element for another to obtain predictable results; C)

Art Unit: 2618

Use of known technique to improve similar devices (method, or product) in the same way; D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable result. MPEP 2143. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the transmission in an omnidirectional manner is effected in a more robust fashion than the transmission in a directional manner using a directional antenna (See Proctor, Jr., Col 9, lines 55-67) to Admitted Prior Art and Labonte (Category D above) in order to obtain similar results such as to reduce interference and throughput of data transfer in faster rate.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2618

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOMINIC E. REGO whose telephone number is (571)272-8132. The examiner can normally be reached on Monday-Friday, 8:30 am-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc M. Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dominic E. Rego  
/Dominic E Rego/  
Examiner, Art Unit 2618  
Tel 571-272-8132

Application/Control Number: 10/575,331

Page 12

Art Unit: 2618

/Duc Nguyen/

Supervisory Patent Examiner, Art Unit 2618